
**Test conditions for vertical internal
type broaching machines — Testing of
accuracy**

*Conditions d'essai des machines verticales à brocher les intérieurs —
Contrôle de l'exactitude*



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Foreword

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This document was prepared by Technical Committee ISO/TC 39, *Machine Tools*, Subcommittee SC 2, *Test conditions for metal cutting machine tools*.

This third edition cancels and replaces the second edition (ISO 6779:2019), which has been technically revised.

The main changes are as follows:

- the French terms have been moved from [Figures 1](#) and [2](#) to [Tables A.1](#) and [A.2](#);
- subclause 5.7 on axes not under test has been deleted;
- the observations in all geometrical tests have been updated.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Test conditions for vertical internal type broaching machines — Testing of accuracy

1 Scope

This document specifies, with reference to ISO 230-1, the geometric tests on vertical internal type broaching machines with vertical Z-axis providing the main cutting motion.

This document also specifies the applicable tolerances corresponding to the tests mentioned above for normal-accuracy vertical internal type broaching machines.

This document explains the concepts, configurations and common features of vertical internal type broaching machines. This document also provides related terminology and designation of axes.

This document covers only the verification of the accuracy of the broaching machine. This document does not apply to the operational testing of the machine (e.g. vibration, abnormal noise, stick-slip motion of components) nor to machine characteristics (e.g. speeds, feeds) as such checks are generally carried out before testing the accuracy.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 230-1:2012, *Test code for machine tools — Part 1: Geometric accuracy of machines operating under no-load or quasi-static conditions*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 230-1 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1

internal broaching operation

machining process in which a *broach* (3.2) is pushed or pulled through a hole to remove material by linear cutting

3.2

broach

cutting tool that has multiple transverse cutting edges each with progressively increased size

3.3

broaching machine

machine tool in which broaching operation is executed